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Efficacy of movement control exercise versus general exercise on recurrent sub-acute low back pain in a sub-group of patients with movement control impairment: a randomized controlled trial

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Background: Clinical guidelines recommend research on sub-groups of low back pain (LBP), but only few studies have been published. One sub-group of LBP is movement control impairment (MCI) and clinical tests to identify this sub-group have been developed. As a whole, general exercise seems to be beneficial for management of chronic LBP (CLBP), but very little is known about the management of a sub-acute LBP.

Methods: A randomized controlled trial (RCT) was conducted to compare the effects of general exercise versus specific movement control exercise (SMCE) on disability and function in patients with MCI within recurrent sub-acute LBP. Participants attended for up to five treatment sessions of manual therapy and either specific or general exercise. The primary outcome was disability assessed by the Roland-Morris Disability Questionnaire (RMDQ). The measurements were taken at baseline, immediately after three months intervention and at twelve months follow-up.

Results: Seventy patients met the inclusion criteria and were eligible for the trial. Measurements of 61 patients (SMCE n=30 and general exercises n=31) were completed by twelve months (drop-out rate: 12.9%). Both groups significantly improved with their respective therapeutic interventions. Mean changes of groups in the RMDQ from baseline to twelve months measurement showed significantly superior improvement for SMCE group -1.7 points (-3.9 to -0.5) 95% (CI).

Conclusion: Combination of manual therapy and SMCE is likely to be superior to manual therapy and general exercise following the intervention and twelve moths follow-up for subjects with non-specific recurrent sub-acute LBP with movement control impairment.

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